

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First

Named

Inventor: Neil David Hammond Raven

Examiner: Deborah K. Ware

Serial No.: 10/614,370

Filing Date: July 8, 2003

Group Art Unit No. 1651

Title: DEGRADATION AND DETECTION
OF TSE INFECTIVITY

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

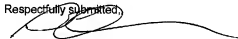
Dear Sir:

In accordance with the provisions of 37 C.F.R. § 1.56, Applicants request that citation and examination of the references identified on the attached Form PTO-1449, required copies of which are enclosed herewith in accordance with 37 C.F.R. §1.98, be made during the course of examination of the above-referenced application for United States Letters Patent.

Since this Information Disclosure Statement is being submitted after the mailing of the first Office Action, payment of the fee set forth in 37C.F.R. §1.17(p) accompanies this submission.

- Payment by credit card. Form PTO-2038 is attached.

Respectfully submitted,



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Form PTO-1449 (Rev. 8-88)	Attorney Docket No. MSQ01-002-CIP-US	Serial No. 10/614,370
First Named Inventor Neil David Hammond Raven		
Filing Date: July 8, 2003		Group: 1651

INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

Examiner Initials*		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	Z1	RE 34,606	06/1994	Estell, et al.			
	Z2	4,994,200	02/1991	Disch, et al.			
	Z3	5,182,204	01/1993	Estell, et al.			
	Z4	5,185,258	02/1993	Caldwell, et al.			
	Z5	5,204,015	04/1993	Caldwell, et al.			
	Z6	5,700,676	12/1997	Bott, et al.			
	Z7	5,783,257	06/1998	Bott, et al.			
	Z8	5,801,038	09/1998	Bott, et al.			
	Z9	6,312,936	11/2001	Poulose, et al.			
	Z10	6,613,805	09/2003	Shih			

FOREIGN PATENT DOCUMENTS

Examiner Initials*		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	Y1	0 251 446	01/1988	EP				
	Y2	0 328 299	08/1989	EP				
	Y3	0 723 690	12/2004	EP				
	Y4	1 526 182	04/2005	EP				
	Y5	WO 00/29849	05/2000	WO				
	Y6	WO 00/22438	04/2000	WO				
	Y7	WO 89/06279	07/1989	WO				
	Y8	WO 95/10615	04/1995	WO				

Examiner Initials*	OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS	
	Include, as applicable: Author, Title, Date, Publisher, Edition or Volume, Pertinent Pages	
X1	Bajorath, J., et al., "The enzymatic activity of proteinase K is controlled by calcium", European Journal of Biochemistry, vol. 176, pp. 441-447, (1988).	

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X2	Bauer, C., et al., "Purification of a PrP-Dimer expressed in <i>E. coli</i> ", <i>Infection</i> , P-201, vol. 28, supplement no. 1, pp. 51, (2000).
X3	Bernoulli, C., et al., "Danger of accidental person-to-person transmission of creutzfeldt-jakob disease by surgery", <i>The Lancet</i> , pp. 478-479, (1977).
X4	Bolton, D.C., et al., "Identification of a protein that purifies with the scrapie prion", <i>Science</i> , vol. 218, pp. 1309-1311, (1982).
X5	Caughey, B., et al., "Scrapie infectivity correlates with converting activity, protease resistance, and aggregation of scrapie-associated prion protein in guanidine denaturation studies", <i>Journal of Virology</i> , vol. 71, no. 5, pp. 4107-4110, (1997).
X6	Cho, H.J., "Requirement of a protein component for scrapie infectivity", <i>Intervirology</i> , vol. 14, pp. 213-216, (1980).
X7	Cho, H.J., "Inactivation of the scrapie agent by pronase", <i>Can. J. Comp. Med.</i> , vol. 47, pp. 494-496, (1983).
X9	Ebeling, W., et al., "Proteinase K from <i>Tritirachium album limber</i> ", <i>European Journal of Biochemistry</i> , vol. 47, pp. 91-97, (1974).
X10	Haki, G.D., et al., "Developments in industrially important thermostable enzymes: a review", <i>Bioresource Technology</i> , vol. 89, pp. 17-34, (2003).
X12	Herbert, R.A., "A perspective on the biotechnological potential of extremophiles", <i>Trends in Biotechnology</i> , vol. 10, pp. 395-402, (1992).
X13	Hunter, G.D., "The enigma of the scrapie agent: Biochemical approaches and the involvement of membranes and nucleic acids", <i>Slow transmissible diseases of the nervous system</i> , eds: Prusiner & Hadlow, Academic Press, Inc., vol. 2, pp. 365-385, (1979).
X14	Hunter, G.D., et al., "Attempts to release the scrapie agent from tissue debris", <i>J. Comp. Path.</i> , vol. 77, pp. 301-307, (1967).
X15	Hunter, G.D., et al., "Further studies of the infectivity and stability of extracts and homogenates derived from scrapie affected mouse brains", <i>J. Comp. Path.</i> , vol. 79, pp. 101-108, (1969).
X16	Kocisko, D.A., et al., "Cell-free formation of protease-resistant prion protein", <i>Nature</i> , vol. 370, pp. 471-474, (1994).
X17	Kristjansson, J.K., "Thermophilic organisms as sources of thermostable enzymes", <i>Trends in Biotechnology</i> , vol. 7, pp. 349-353, (1989).
X18	Laurenson, I.F., et al., "Contaminated surgical instruments and variant Creutzfeldt-Jakob disease", <i>The Lancet</i> , vol. 354, pp. 1823, (1999).
X19	Meyer, R.K., et al., "A monomer-dimer equilibrium of a cellular prion protein (PrP ^C) not observed with recombinant PrP ^{Sc} ", <i>The Journal of Biological Chemistry</i> , vol. 275, no. 48, issue of December 1, pp. 38081-38087, (2000).
X20	Millon, G.C., et al., "The physico-chemical nature of the scrapie agent", <i>Slow virus diseases of animals and man</i> , Chapter 11, edited by R.H. Kimberlin, North-Holland Publishing Company, pp. 243-266, (1976).
X21	NG, T.K., et al., "Industrial applications of thermostable enzymes", <i>Thermophiles: General, Molecular and Applied Microbiology</i> , Brock TD Editor, John Wiley and Sons, chapter 9, pp. 197-215, (1986).
X22	Proia, S.A., et al., "A 60-kDa prion protein (PrP) with properties of both the normal and scrapie-associated forms of PrP ^{Sc} ", <i>The Journal of Biological Chemistry</i> , vol. 270, no. 7, issue of February 17, pp. 3299-3305, (1995).
X23	Product Description, "Proteinase K", <i>Fermentas Life Sciences</i> , http://www.fermentas.com/profiles/modifyingenzymes/pdf/protk0491.pdf , 3 pages, (2004).
X24	Sarath, G., et al., "Protease assay methods", <i>Proteolytic enzymes, Practical Approach</i> , (ed. By Beynon, R.J., and Bond, J.S., Oxford University Press, New York, Oxford, pp. 25-55, (1989).
X25	Prusiner, S.B., et al., "Further purification and characterization of scrapie prions", <i>Biochemistry</i> , vol. 21, no. 26, pp. 6942-6950, (1982).
X26	Prusiner, S.B., et al., "Gel electrophoresis and glass permeation chromatography of the hamster scrapie agent after enzymatic digestion and detergent extraction", <i>Biochemistry</i> , vol. 19, no. 21, pp. 4892-4898, (1980).

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X27	Prusiner, S.B., et al., "Electrophoretic properties of the scrapie agent in agarose gels", Proc. Natl. Acad. Sci. USA, Microbiology, vol. 77, no. 5, pp. 2984-2988, (1980)
X28	Prusiner, S.B., et al., "Partial purification and evidence for multiple molecular forms of the scrapie agent", Biochemistry, vol. 17, no. 23, pp. 4993-4999, (1978).
X29	Sharp, R.J., et al., "Isolation and growth of hyperthermophiles", Applied Microbial Physiology: A Practical Approach, Ch. 2, Eds. Stanbury and Rhodes, OUP, pp. 23-52, (1997).
X30	Raymond, G.J., et al., "Molecular assessment of the potential transmissibilities of BSE and scrapie to humans", Nature, vol. 388, pp. 285-288, (1997).
X31	Rubenstein, R., et al., "Concentration and distribution of infectivity and PrP ^{Sc} following partial denaturation of a mouse adapted and a hamster-adapted scrapie strain", Archives of Virology, vol. 139, pp. 301-311, (1994).
X32	Safar, J., et al., "Molecular mass, biochemical composition, and physicochemical behavior of the infectious form of the scrapie precursor protein monomer", Proc. Natl. Acad. Sci. USA, vol. 87, pp. 6373-6377, (1990).
X33	Siezen, R.J., et al., "Homology modeling and protein engineering strategy of subtilases, the family of subtilisin-like serine proteinases", Protein Engineering, vol. 4, no. 7, pp. 719-737, (1991).
X34	Taylor, D.M., "Inactivation of prions by physical and chemical means", Journal of Hospital Infection, vol. 43 (supplement), pp. S69-S76, (1999).
X35	Taylor, D.M., et al., "Decontamination studies with the agents of bovine spongiform encephalopathy and scrapie", Archives of Virology, vol. 139, pp. 313-326, (1994).
X36	Wille, H., et al., "Separation of scrapie prion infectivity from PrP amyloid polymers", J. Mol. Biol., vol. 259, pp. 609-621, (1996).
X37	Corrected Evidence in Support, All opposition proceedings filed in corresponding Australian Opposition, January 20, 2006.